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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,546	12/15/1999	NAHUM CHERNICHOVSKI	03022/36039	7722

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EXAMINER

LUU, THANH X

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 11/27/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/464,546

Applicant(s)

CHERNICHOVSKI ET AL.

Examiner

Thanh X Luu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-36, the use of the term "generally" is indefinite. For instance, it is unclear how transparent a substrate is when it is "generally transparent." That is, it is unclear in its given context the degree of transparency that Applicant intends to claim. Likewise, term "generally" is similarly problematic with each use in the claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-12 and 25-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uhlmann et al. (U.S. Patent 4,012,232).

Regarding claims 1, 5, 25 and 29, Uhlmann et al. disclose (see column 7, lines 10-53) an optical element comprising: a plastic substrate (plastic host material); a pigment (photochromic pigment) disposed in the substrate in an amount that does not decrease transmission of infrared radiation (photochromic pigments are well known not to absorb infrared radiation), the pigment being non-transmissive to at least one of visible or ultraviolet light (photochromic pigments are well known to absorb or reflect visible or UV light), the pigment being reactable with the substrate over time to create a reaction product which can decrease transmission of the infrared radiation ("protect the pigments from deactivation by exposure to.. various plastic host materials"); and a protective agent (inorganic coating) disposed in the substrate in an amount that does not decrease transmission of the infrared radiation and which prevents creation of the reaction product which can decrease transmission of the infrared radiation ("protect the pigments from deactivation by exposure to moisture, oxygen, various plastic host materials, reactive chemicals"). Uhlmann et al. further disclose (see column 7, lines 51-53) the substrate being used in ophthalmic lenses, camera filters and windshields. Uhlmann et al. do not specifically disclose the substrate being transparent to infrared

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radiation in a wavelength range of 5-16 microns. However, polyethylene is a widely used plastic in camera filters, windshields and ophthalmic lenses and is transparent to infrared radiation in the claimed range. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use such a polyethylene substrate in the apparatus of Uhlmann et al. to provide a resilient optical element as known in the art.

Regarding claims 2-4, 6, 8, 26-28, 30 and 32, Uhlmann et al. further disclose (see column 7) the protective agent mixed with the pigment or coating the pigment such that the pigment does not contact the substrate. Uhlmann et al. further disclose (see claim 6) the protective agent comprises zinc oxide. Further, the protective agent of protects the pigments from oxidization and forming a nontransmissive infrared radiation oxidation product since Uhlmann et al. teaches protection from oxygen and other reactive chemicals. Uhlmann et al. does not specifically disclose high density polyethylene. However, the particular type of polyethylene is design choice. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to choose high density polyethylene in the apparatus of Uhlmann et al. to increase durability.

Regarding claims 10-12 and 34-36, Uhlmann et al. disclose (see column 5, lines 34-35) particles in a size range of 30 angstroms to 1 micron. Thus, the range falls within .5 to 6 microns. Furthermore, zinc oxide is also a pigment. Uhlmann et al. also teach using various other protective agents that are not pigments.

Regarding claims 7 and 31, Uhlmann et al. does not specifically disclose zinc sulfide as the pigment. However, the particular type of pigment is design choice. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use zinc sulfide, a widely used pigment, in the apparatus of Uhlmann et al. as desired to reduce costs.

Regarding claims 9 and 33, Uhlmann et al. disclose (see column 7) that the encapsulation of the pigment with the protective agent does not have to be 100%. Thus, Uhlmann et al. recognize that a wide variety of concentrations of pigment to protective agent can be used. However, Uhlmann et al. does not specifically disclose the amount of pigment relative to the amount of protective agent as claimed. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a range of concentrations of materials in which the device of Uhlmann et al. would optimally work in order to manufacture varying types of elements for varying situations.

Allowable Subject Matter

6. Claims 13-24 would be allowable once the 112 2nd paragraph rejections are overcome.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is (703) 305-

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0539. The examiner can normally be reached on Monday-Friday from 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seungsook Ham, can be reached on (703) 308-4090. The fax phone number for the organization where the application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

txl
November 13, 2001

Que T. Le
Primary Examiner